

405 KAR 1:100. Topsoil handling.

RELATES TO: KRS 350.415

STATUTORY AUTHORITY: KRS 350.028

NECESSITY, FUNCTION, AND CONFORMITY: KRS 350.028 requires the Environmental and Public Protection Cabinet to adopt rules and administrative regulations for the strip mining of coal. This administrative regulation sets forth requirements relating to the handling of topsoil.

Section 1. To prevent topsoil from being contaminated by spoil or waste materials, the topsoil shall be removed from the area to be disturbed as a separate operation. The topsoil shall be immediately redistributed on the areas graded to the approved postmining configuration unless storage of the topsoil by stockpiling or other means is approved by the cabinet. If sufficient graded areas are not immediately available for topsoil redistribution, and the stockpiling of topsoil is approved by the cabinet, the topsoil shall be segregated, stockpiled, and protected from wind and water erosion and from contaminants which would lessen its capability to support vegetation.

Section 2. Topsoil Removal. All topsoil to be salvaged shall be removed before any drilling for blasting, mining, or other surface disturbance.

(1) All topsoil shall be removed unless the use of alternative materials is approved by the cabinet in accordance with Section 6 of this administrative regulation. The size of the area from which topsoil may be removed at any one time shall be limited if the removal of the topsoil would result in erosion that may cause air or water pollution. The cabinet may specify methods of treatment to control erosion of exposed overburden.

(2) All of the A horizon as identified by soil surveys shall be removed as provided in this section and then replaced on disturbed areas as the surface soil layers. Where the A horizon is less than six (6) inches, a six (6) inch layer that includes the A horizon and the unconsolidated material immediately below the A horizon (or all unconsolidated material if the total available is less than six (6) inches), shall be removed and the mixture segregated and replaced as the surface soil layer.

(3) The cabinet may require that the B horizon or portions of the C horizon or other underlying layers demonstrated to have comparable quality for root development be segregated and replaced as subsoil where necessary to obtain productivity consistent with the approved postmining land use.

Section 3. Topsoil Redistribution. (1) After the final grading has been completed and before the topsoil is replaced, the regraded land shall be scarified or otherwise treated to eliminate slippage surfaces and to promote root penetration.

(2) The topsoil shall be redistributed on the regraded area in a manner which:

- (a) Achieves an approximate uniform thickness consistent with postmining land uses;
- (b) Prevents excessive compaction of the spoil and topsoil; and
- (c) Protects the topsoil from wind and water erosion before it is seeded and planted.

Section 4. Topsoil Storage. Stockpiled topsoil shall be placed on stable areas within the permit area. The locations should be such that the stockpiled topsoil will not be disturbed or be exposed to excessive water, wind erosion, or contaminants which would lessen its capability to support vegetation before it can be redistributed on terrain graded to final contour. Stockpiled topsoil shall be protected either by a vegetative cover or by other methods demonstrated to provide equal protection, including but not limited to chemical binders and mulching. Unless approved by the cabinet, stockpiled topsoil shall not be moved until it is moved for redistribution on a disturbed area.

Section 5. Nutrients and soil amendments, in appropriate amounts and analyses as determined

by soil tests, shall be applied to the surface soil layer so that it will support the postmining land use requirements and revegetation requirements of this chapter.

Section 6. Alternative Materials. When the existing topsoil is of insufficient quantity or poor quality for sustaining vegetation, the cabinet may approve the use of selected overburden materials, alternative soil materials or soil amendments as alternatives or supplements to topsoil, where the resulting soil medium is equally or more suitable for vegetation, provided the requirements of this section are met.

(1) The applicant shall demonstrate by the results of chemical and physical analyses that the selected alternative material or alternative topsoil mixture is equally or more suitable than the original topsoil for restoring land capability and productivity. These analyses shall include determination of pH, percent organic material, nitrogen, phosphorus, potassium, texture class, water holding capacity, and such other analyses as the cabinet may require. The cabinet may also require the use of field-site trials or greenhouse tests to demonstrate the feasibility of using such alternative materials.

(2) Chemical and physical analyses and results of field-site trials and greenhouse tests shall be accompanied by a certification from a qualified soil scientist or agronomist.

(3) The alternative material shall be removed, segregated, and replaced in conformance with this section as necessary. (4 Ky.R. 387; eff. 5-3-78; Am. 485; 5 Ky.R. 198; eff. 8-23-78; TAm eff. 8-9-2007.)